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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,117	03/25/2004	James Schleicher	306812005700	8048
47520	7590	07/26/2005	EXAMINER	
ALTERA c/o MOFO SF 425 MARKET STREET SAN FRANCISCO, CA 94105			CHO, JAMES HYONCHOL	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/810,117	Applicant(s) SCHLEICHER ET AL.	
	Examiner James Cho	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-24 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to because lines, numbers & letters in Figs. 1 - 4 are not uniformly thick and well defined, clean, durable, and black. 37 CFR 1.84(l). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --Omnibus Logic Element including Look-up Table-base Logic Elements--.

Claim Objections

Claims 1 and 3 are objected to because of the following informalities:

In claim 1, "A plurality" on line 2 appears to be --a plurality--;

In claim 3, "MUX the first" on line 1 appears to be --MUX, the first--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Pedersen (US PAT No. 6,798,240).

Regarding claim 1, Fig. 5 of Pedersen teaches a logic circuit including; a plurality of look up tables (530s and 550s) driven by a plurality of inputs (A1, A2, B1, B2, C1, C2), each of the plurality of LUTS included either in a first group of LUTS (530s) or a second group of LUTS (550s); at least one (A1) of the plurality of inputs driving each of the plurality of LUTS; at least a second (A2) of the plurality of inputs driving each LUT in the first group of LUTS and connectable to drive at least one of the LUTS in the second group of LUTS (550); at least a third (B1) of the plurality of inputs connectable to drive at least one of the LUTS in the first group of LUTS; at least two LUTS (two 530) in the first group of LUTS each driving a first multiplexer (570) and a second MUX (second 570); and at least a fourth (signals at either 506a or 506b) of the plurality of inputs driving a control input of the first MUX.

Regarding claim 2, Fig. 5 of Pedersen teaches the logic circuit of claim 1 including; at least a fifth input (B2) driving each LUT in the second group of LUTS and connectable to drive at least one of the LUTS in the first group of LUTS (505 receives B2 via 535, col. 13, lines 29-34), at least a sixth input (C2 via 555) of the plurality of inputs connectable to drive at least one of the LUTS in the second group of LUTS; at least two LUTS in the second group of LUTS each driving a third MUX (590) and a

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fourth MUX (590); and at least a seventh input (Vcc via 516b) of the plurality of inputs driving a control input of the third MUX.

Allowable Subject Matter

Claims 16-24 are allowable over the prior art of record.

Claims 3-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter; one of ordinary skill in the art would not have been motivated to modify the teaching of Pedersen to further includes, among other things, the specifics of the first input MUX driven by the at least third input and the at least fifth input where the first input MUX drives at least one of the LUTS in the first group of LUTS and the control input of the second MUX and the second input MUX drives at least one of the LUTS in the second group of LUTS and the control input of the fourth MUX as required by claim 3, the specifics of the first group of LUTs and the second group of LUTs including a 4-input LUT and two 3-input LUTs respectively, the specifics of at least a first adder and a second adder where the first adder is driven by one of the first plurality of LUTS and at least one of either one of the first plurality of multiplexers or a share-in input to the logic circuit, and the second adder is driven by one of the second plurality of LUTS and one of either one of the second plurality of multiplexers or one of the first plurality of multiplexers as required by claim 16, and the specifics of the first configuration carrying out a first 6-input logic function along with a second 6-input logic function, the first 6-

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input logic function sharing at least 4 inputs with the second 6-input logic function as required by claim 23.

Conclusion

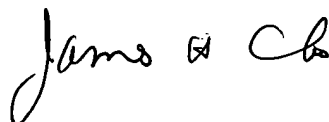
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Young et al. (US PAT No. 6,124,731) discloses a configurable logic element with ability to evaluate wide logic functions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Cho whose telephone number is 571-272-1802. The examiner can normally be reached on M-F 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James H. Cho
Primary Examiner
AU 2819

7/23/2005